

LISTING OF CLAIMS

1-29. (Canceled)

30. (New) An apparatus for lowering internal battery resistance that has:

a pulse generator that delivers pulses to at least one terminal of a battery;

a controller that controls the pulse generator; and

a voltage input selector that enables a user to select a voltage threshold below which pulses are not generated.

31. (New) The apparatus of claim 30, in which the voltage input selector enables the user to select from at least two possible voltage thresholds.

32. (New) The apparatus of claim 30, in which the voltage input selector enables the user to select either a high voltage threshold or a low voltage threshold.

33. (New) The apparatus as claims in claim 30, in which the voltage input selector has a switch coupled to a voltage divider.

34. (New) The apparatus of claim 30, that also has a controller input that is connected to an output of the pulse generator.

35. (New) The apparatus of claim 30, that also has a controller output that is connected to an input stage of the pulse generator.

36. (New) The apparatus of claim 30, in which a comparator in the controller compares the voltage threshold of the voltage input selector with a measured voltage.

37. (New) The apparatus of claim 30, in which a comparator in the controller compares the voltage threshold of the voltage input selector with a measured voltage of the battery.

38. (New) The apparatus of claim 37, in which the comparator outputs a signal if the measured voltage is above the voltage threshold.

39. (New) The apparatus of claim 30, in which the pulse generator has a wave generator that generates a wave that has a predetermined frequency and wave width.
40. (New) The apparatus of claim 30, in which the pulse generator has a square wave generator that generates a wave that has a predetermined frequency and wave width.
41. (New) The apparatus of claim 40, in which the pulse generator has an input switch controlled by the controller.
42. (New) The apparatus of claim 41, in which the output switch has a transistor.
43. (New) The apparatus of claim 30, in which the controller varies the amplitude of pulses delivered to the battery based on the internal resistance of the battery.
44. (New) The apparatus of claim 43 that also has a battery condition circuit that indicates the amplitude of predetermined pulses delivered to the battery.
45. (New) The apparatus of claim 30, that also has:
an indicator means that indicates the voltage of a pulse applied to the battery;
a first input for connection to the battery; and
a second input connected to an output of the controller.
46. (New) The apparatus of claim 45, in which the indicator means indicates that the voltage of the pulse applied to the battery has one of a plurality of possible amplitudes.
47. (New) The apparatus of claim 46, in which the indicator means has three different indicators.
48. (New) The apparatus of claim 46, in which the indicator means has three LEDs each connected to an out put stage of an associated operational amplifier.
49. (New) The apparatus of claim 48, in which an input of each of the operational amplifiers is connected to a reference voltage source.

50. (New) An apparatus for lowering battery internal resistance, that has:
- a wave generator;
 - a filter circuit;
 - a switch that is configured to be switched on in response to a signal generated by the wave generator;
 - an inductor means that works with the switch to generate a periodic pulse that is applied to a terminal of a battery, lowering the internal resistance of the battery; and
 - a voltage input selector that enables a user to select a voltage threshold below which periodic pulses are not generated.
51. (New) The apparatus of claim 50, in which the inductor means is connected to an output of the switch and to an output of the filter.
52. (New) The apparatus of claim 50, in which both the switch and the inductor means are connected to one terminal of the battery.
53. (New) The apparatus of claim 52 that also has a pulse width selector for altering the width of the pulse generated by the apparatus.
54. (New) The apparatus of claim 50 that also has a pulse frequency selector that adjusts the frequency of the pulse generated by the apparatus.
55. (New) The apparatus of claim 50, in which the inductor means has two inductors in parallel.
56. (New) The apparatus of claim 55 that also has a controller that selectively controls operation of the apparatus in accordance with the voltage threshold.
57. (New) The apparatus of claim 56, in which an input of the controller is connected to the inductor means and to the switch.

58. (New) The apparatus of claim 50 that also has a controller that selectively controls operation of the apparatus depending on the voltage threshold and input from a battery internal resistance indicator that provides a visual indication of at least two different internal resistance values for the battery.